Daniel J. Nowacki

U.S. Geological Survey · Woods Hole Coastal & Marine Science Center
384 Woods Hole Road · Woods Hole, MA 02543
(508) 457-2332 · dnowacki@usgs.gov

Education

Doctor of Philosophy — 2015
University of Washington School of Oceanography
Thesis title: Sediment dynamics in tidal systems spanning a range of fluvial influence
Adviser: Andrea Ogston

Master of Science in Engineering (Civil) — 2010
University of Washington Dept. of Civil & Environmental Engineering
Thesis title: Sediment removal from the Columbia River plume using a control volume formulation
Adviser: Alexander Horner-Devine

Bachelor of Science in Computer Engineering — 2004
Syracuse University College of Engineering & Computer Science
Summa cum laude
Physics Minor

Employment

Research Oceanographer — 2015–present
Mendenhall Postdoctoral Research Fellow
U.S. Geological Survey Woods Hole Coastal & Marine Science Center

Graduate Research Assistant — 2009–2015
University of Washington School of Oceanography

Graduate Research Assistant — 2008–2009
University of Washington Dept. of Civil & Environmental Engineering

Hydrologist (GS-09) — 2004–2008
U.S. Geological Survey National Research Program

Student Researcher — 2003
Universidad Politécnica de Madrid, Madrid, Spain

Teaching

Graduate Teaching Assistant — 2012, 2013
T.A. for OCEAN 410: Marine Geology & Geophysics and OCEAN 201: Introduction to Oceanography Lab
University of Washington School of Oceanography

Guest Lecturer — 2012, 2013
Guest lecturer for Friday Harbor Labs Research Apprenticeship
University of Washington School of Oceanography

Grants, Activities, Awards, and Scholarships

Pan-American Advanced Studies Institute — 2013
Short course: "Toward a Sustained Operational River-to-Shelf Observation & Prediction System for the Amazon"

Universidade Federal Fluminense, Niteroi, Brazil

School of Oceanography Innovation Grant 2013
Development of an underwater imaging system ($2,000)

National Defense Science & Engineering Graduate (NDSEG) fellowship 2010–2013
Three-year tuition and salary award for study leading to a Ph.D ($189,681)

Engineers Without Borders USA, University of Washington chapter 2008–2011
Active graduate-student member; served on two assessment and implementation trips to Andean Bolivia in 2009 and 2011

USGS/DOI STAR Award 2007
U.S. Geological Survey

IEEE (Institute of Electrical and Electronics Engineers) Best Senior Design Project Implementation Award 2004
Syracuse University

Eagle Scout, Boy Scouts of America

Skills, Training, &c.

- Varied and extensive field-based scientific research experience on four continents. Ship/field time: 60+ days tidal Amazon River, Brazil; 21+ days tidal Mekong River, Vietnam; 40+ days Waipaoa shelf, New Zealand; 7 days Sego Sandstone, Book Cliffs, Utah; 20+ days Willapa tidal flats, Washington; 14 days Washington/Oregon shelf; 50+ days Florida Everglades
- Broad small boat operation experience in support of scientific research
- Instrumentation design and integration
- Programming: hydrodynamic model compilation and configuration (primarily Delft3D, some ROMS), Matlab, FORTRAN, Perl, Python, ArcGIS, C, NetCDF, shell scripting
- Linux/UNIX system administration
- U.S. Government B-3 aviation training; OSHA forklift operator training
- Written and conversational spoken Spanish

Professional Memberships

American Geophysical Union

Publications

Nowacki, D.J., Ogston A.S., Nittrouer, C.A., Fricke, A.T., Van, P.D.T., 2015, Sediment dynamics in the lower Mekong River: transition from tidal river to estuary, *Journal of Geophysical Research: Oceans*, doi:10.1002/2015JC010754.

Nowacki, D.J., Ogston A.S., 2013, Water and sediment transport of channel-flat systems in a mesotidal mudflat: Willapa Bay, Washington, *Continental Shelf Research*, doi:10.1016/j.csr.2012.07.019.

Nowacki, D.J., Horner-Devine, A.R., Nash, J.D., Jay, D.A., 2012, Rapid sediment removal from the Columbia River Plume, *Continental Shelf Research* 35, doi:10.1016/j.csr.2011.11.013.

Harvey, J.W., Noe, G.B., Larsen, L.G., **Nowacki, D.J.**, McPhillips, L.E., 2011, Field flume reveals aquatic vegetation's role in sediment and particulate phosphorus transport in a shallow aquatic ecosystem, *Geomorphology* 126.

Harvey, J.W., Schaffranek, R.W., Noe, G.B., Larsen, L.G., **Nowacki, D.J.**, OConnor, B.L., 2009, Hydroecological factors governing surface water flow on a low-gradient floodplain, *Water Resources Research* 45.

Schaffranek, R.W., Stewart, M.A., and **Nowacki, D.J.**, 2007, Surface-Water Exchange through Culverts along State Road 9336 within Everglades National Park, 2004-2005, *U.S. Geological Survey Data Series* 358.

Presentations

Nowacki, D.J., Ogston, A.S., Nittrouer, C.A., Fricke, A.T., Souza-Filho, P.W.M., Asp, N.E., Tidal-channel flow and sediment transport in environments influenced by the tidal Amazon River, Brazil, 2014 Ocean Sciences Meeting, 23–28 February 2014, Honolulu, HI.

Nowacki, D.J., Ogston, A.S., Nittrouer, C.A., Fricke, A.T., Souza-Filho, P.W.M., Asp, N.E., Dynamics of sediment transport in large tropical tidal rivers via observations in the Mekong and Amazon, AGU Fall Meeting, 9–13 December 2013, San Francisco, CA.

Nowacki, D.J., Ogston, A.S., Nittrouer, C.A., Souza-Filho, P.W.M., Silva, M.S., Silveira, O.F., Fricke, A.T., The Amazon tidal river as a missing link in the transport of water and sediment to the ocean, University of Washington Water Symposium, 18 April 2012, Seattle, WA.

Nowacki, D.J., Ogston, A.S., Nittrouer, C.A., Souza-Filho, P.W.M., Silva, M.S., Silveira, O.F., Fricke, A.T., Water and sediment transport in the Amazon tidal river and its tributaries, Ocean Sciences Meeting, 20–24 February 2012, Salt Lake City, UT.

Nowacki, D.J., Ogston, A.S., 2011, Multiple scales of controls on sediment transport in intertidal flats: tidal stage, storms, and seasons, AGU Chapman Conference on Source to Sink Systems Around the World and Through Time, 24–27 January 2011, Oxnard, CA.

Nowacki, D.J., Ogston, A.S., 2010, Water-surface elevation controls on sediment-transport dynamics in channel-flat environments of intertidal flats, AGU Fall Meeting, 15–17 December 2010, San Francisco, CA.

Nowacki, D.J., Ogston, A.S., Nittrouer, C.A., 2010, Water-surface elevation controls on sediment-transport dynamics in channel-flat environments of intertidal flats, AGU Ocean Sciences Meeting, 22–26 February 2010, Portland, OR.

Ogston, A.S., **Nowacki, D.J.**, Lee, K.M., Boldt, K.V., 2010, Role of Channel Morphology on Channel-Flat Sediment-Transport Dynamics of Tidal Flats, AGU Ocean Sciences Meeting, 22–26 February 2010, Portland, OR.

Nittrouer, C.A., Boldt, K.V., Lee, K.M., **Nowacki, D.J.**, 2010, Dramatically Different Fates for Fine Sediment on Two Mesotidal Flats: Skagit Bay and Willapa Bay, Washington, AGU Ocean Sciences Meeting, 22–26 February 2010, Portland, OR.

Nowacki, D.J., Horner-Devine, A.R., Nash, J.D., Jay, D.A., 2009, Turbulent Removal of Sediment from a Buoyant River Plume, Coastal and Estuarine Research Federation 20th Biennial Conference, 1–5 November 2009, Portland, OR.

Harvey, J.W., Noe, G.B., Larsen, L.G., **Nowacki, D.J.**, Schaffranek, R.W., 2008, Relative importance of hydro-ecological processes governing self-organization of the Everglades ridge and slough landscape, Greater Everglades Ecosystem Restoration Conference (GEER), 28 July–1 August 2008, Naples, FL, p. 165-167.

Harvey, J.W., Noe, G.B., Larsen, L.G., **Nowacki, D.J.**, Schaffranek, R.W., 2008, Threshold for Everglades sediment entrainment determined by flow enhancement in a field flume, Greater Everglades Ecosystem Restoration Conference (GEER), 28 July–1 August 2008, Naples, FL, p. 168-169.

Larsen, L.G., Harvey, J.W., Noe, G.B., **Nowacki, D.J.**, 2008, Transport dynamics of floc in ridge and slough vegetation communities: a laboratory flume experiment and numerical study, Greater Everglades Ecosystem Restoration Conference (GEER), 28 Jul–1 August 2008, Naples, FL, p. 245-246.

Schaffranek, R.W., Harvey, J.W., Noe, G.B., Riscassi, A.L., **Nowacki, D.J.**, Larsen, L.G., 2006, Sheet flow in the ridge and slough landscape of Everglades Water Conservation Area 3A, Greater Everglades Ecosystem Restoration Conference (GEER), 5–9 June 2006, Lake Buena Vista, FL, p. 197.

Schaffranek, R.W., Riscassi, A.L., **Nowacki, D.J.**, 2006, Flow simulation in Everglades

National Park, Third Federal Interagency Hydrologic Modeling Conference, 2–6 April 2006, Reno, NV, 8 p.